it was wont to take that very impetuous motion, and half a degree before it arrived thereto, we took it out. Then looking conſtantly with a carefull eye upon the water in the Globe, which by reaſon of the tranſparency of the Chryſtal was plainly ſeen to be yet altogether fluid and clear, the water, though now out of the Ice, did by the operation of the introduced cold, (after it had attained to its due point with a ſwiftneſs imperceptible to the Eye, the tranſparency within the Globular part being loſt, and it ſelf in an inſtant, as 'twere, deprived of its motion) totally conglaciate. Which Experiment we tried over and over again, and found it alwayes ſucceed alike.

An Extract of a Letter of Monſieur Hevelius, *concerning his Obſervations of the* Moon's Eclipſe, *on* Septemb. 29. *ſt. n.* 1670. *and the* Conjunction *of* Venus *and the* Moon, *on the* 11*th of* Octob. *ſt. n.* 1670; *as alſo ſome remarks about the* New Star *near the* Beak *of the* Swan, *and that other in the* Neck *of the* Whale: *together with ſome other particulars of a Philoſ. nature. Here deliver'd in the ſame Tongue, in which it was written.*

—*NOn potui Reſponſum tuum ad meas ultimas exſpectare, quin rurſus ad Vos ſcriberem, deque recentioribus quibuſdam* Phœnomenis *& Obſervationibus, hîc à me feliciter habitis, certiores redderem; inprimis cum videam, meas quales quales Animadverſiones Cæleſtes Illuſtriſſimæ noſtræ* Societati Regiæ *hactenus non omninò diſplicuiſſe.*

Primò, *die* 29. Septembris *ſt. nov. mane*, Eclipſin Lunæ *Cælo perquam ſereno, ab initio uſque ad finem, ex voto obſervavi. Initium ejus incidit hora* 2. 22′; *quanquam id ipſum vix omnino accuratè obſervari potuerit, ob Umbram Terræ dilutiſſimam: Siquidem, durante Eclipſi, tota Umbra adeò tenuis erat atque diluta, ut omnes præcipuas maculas per eam, meo viginti pedum Tubo, quin & brevioribus, optime conſpicere potuerim.*

Maxima ejus Obſcuratio incidit hor. 3. 50′. *Finis verò h.* 5. 21′. *Tota itaque Duratio fuit hor* 2. 59′; *& Quantitas vix amplius* 9 *digitorum. Quibus verò* Tabulis, *Eclipſeos hujus Obſervatio accuratius reſpondeat, Vos Judicabitis. Juxta* Rudolphinas *hîc Gedani incidit*;

	h.		*hor.*
Initium	2.37′.5″,	*Secundum Riccioli Tab. Initium*	2.14′.47″.
Max. Obſc.	4. 2. 50.	*Max. Obſcur.*	3.55.37.
Finis	5.28. 35.	*Finis*	5.36.27.
Tota dur.	2.51. 30.	*Tota duratio*	3.21.40.
	dig.		
Quantitas	9. 4. 0.	*Quantitas digit.*	11.43. 0.

Circa Medium hujus Eclipſis hor. 3. 40′. *Stellulam quandam incognitam, ac ſolo Tubo conſpicuam, à Luna circa* Lacum nigrum Majorem *tectam, clariſſimè conſpexi; ſed exire eam non deprehendi. Deinde, finitâ Eclipſi, jucundiſſimum quoque obſervatu erat, bina Luminaria ſimul ſupra Horizontem videre. Nam priuſquam Luna occideret, Sol oriebatur. Cætera notatu digna ex particulari hoc Typo deprehendetis:*

Ordo

Ordo Phasium	Phases Lunæ Telescopio Observatæ.	Altitudines	Tempora ex Altitudinibus Correct.	Animadvertenda.
		Caudæ Cygni 50°.54.	hor. 12. 8'.34".	
		Caudæ Cygni 50. 25.	12.11.32.	
		Pollucis ♊ 26. 39.	1.28.56.	
		Pollucis ♊ 27. 16.	1.33.17.	
	Penumb. init.		2.10. 0.	
	Initium Eclip.		2.22. 0	*Cœpit Eclipſ. in part.* ☽ *æ ſup. circa ſin. hyperb.*
1	1 $\frac{3}{8}$ *dig.*		2.31. 0.	*Umbra ſinu Apollinem & M. Porphyr. ſtring.*
2	2 $\frac{1}{4}$		2.36. 0.	*Lacus niger major tegi incipiebat.*
3	3 $\frac{1}{4}$		2.41.40.	*Umbra ad Inſ. Corſicam pervenerat.*
4	3 $\frac{1}{4}$ *paulo plus*		2.45.50.	
5	4 $\frac{3}{8}$		2.49. 0.	*Pal. Mæotis & M. Ætna plane tectus.*
6	5 *dig. fere*		2.53. 0.	
7	5 $\frac{3}{4}$		2.57. 0.	*Inſ. Balbic. & Inſ. Macra tecta.*
8	6 *dig.*		3. 3. 0.	
9	6 $\frac{1}{4}$		3. 5. 0.	
10	6 $\frac{3}{4}$		3. 8 30.	*Inſ. Melos tegi incipiebat.*
11	7 $\frac{1}{8}$		3.11. 0.	
12	7 $\frac{5}{8}$		3.16. 0.	*Inſ Rhodus tecta.*
13	7 $\frac{7}{8}$		3.20. 0.	
14	8 $\frac{1}{4}$		3.25 30.	
15	8 $\frac{1}{2}$		3.29. 0.	*Inſ. major Caſpii tegebatur.*
16	8 $\frac{3}{4}$		3.33.40.	
17	8 $\frac{7}{8}$		3.37.50.	
			3.40. 0.	
18	9 *dig.*		3.47. 0.	*Max. Obſc. per T. Leto. & M. Aber. ſe exten.*
19	9 *paulo min.*		3.51.10.	*Pal. Maræotis ſub umbræ ſectione ſubſiſteb.*
20	8 $\frac{3}{4}$		3.57. 0.	
21	8 $\frac{1}{2}$		4. 1.40.	
22	8 $\frac{1}{4}$ *fere*	*Polluc.* ♊ 49°.50'.	4. 6. 0.	
			4.10.28.	
23	8 *paul. plus*		4.11. 0.	*Inſ. Melos & Rhodus umbrâ exiverant.*
24	7 $\frac{3}{4}$		4.17.20.	
25	7 $\frac{3}{8}$		4.22.25	*M. Porphyrites illuſtrari incipiebat.*
26	6 $\frac{3}{4}$		4.27.35	*Umbra M. Ætnam jam reliquerat.*
27	6 $\frac{1}{4}$ *fere*		4.33.40	
28	5 $\frac{3}{4}$		4.37.37	
29	4 $\frac{3}{4}$		4.44.46.	*M. Argentar. & Inſ. Besbic. illuſtrabantur*
30	4 *d g.*		4.50.50.	
31	3 $\frac{3}{8}$		4.54. 0.	
32	2 $\frac{3}{4}$		4.57. 0.	
33	2 $\frac{1}{4}$ *fere*		5. 1.23	*Umbra totam fere I. Caſpiam maj tranſierat.*
34	1 $\frac{5}{8}$		5. 4.45	
35	1 $\frac{1}{4}$ *dig.*		5. 7.42.	
		Cordis ♌ 25°. 48.	5.10.50.	
	Finis Eclipſ.		5.21.25.	*Fines circa Riphæi montes contigit.*
	Penumb. finis		5.24. 0.	
		Sirii 18°. 54'.	5.28.32.	

Secundo; *die* 11 Octob. *ſt. n. incidit mane, poſt Solis ortum, horâ circiter octavâ, hîc* Gedani, *Conjunctio* Veneris & Lunæ, *quam Calculus Rudophinus pariter eodem fere tempore indigitavit; quo videl.* Luna *parte ſuâ inferiori* Venerem *occultare ad* 23″ *minimum debebat. Ad quod rariſſimum ſpectaculum obſervandum me Tubo* 20. *pedes longo accinxeram. Atque quamvis Aer non omnino eſſet deſæcatus, nubeſque rariuſcu'æ hinc inde obvolitarent, Sole pariter jam orto, nihilominus &* Lunam & Venerem *clariſſimè conſpeximus, ad horam uſque decimam; imò diutius potuiſſemus, ſi fuiſſet opus: Sed à* Luna *ut ut* Tabulæ *dictæ Occultationem illam penitus confirmabant, Venus tamen nequaquam tecta fuit, ſed aberat* hæc, *circa veram ſcil. Conjunctionem, à Limbo* Lunæ *inferiori ad* 4, *vel, minimum,* 3. *minuta; ſic ut nulla eo tempore Occultatio, ſed tantum arctus Tranſitus exti erit. Volupe profecto erat jucundiſſimum illud Spectaculum, de die, Soleque ſplendente, adeò diſtinctè ac dilucidè contemplari.* Luna *namque erat tenuiſſima, ad* Conjunctionem *propendens, valdeque* Corniculata: *At* Venus *propemodum plena, & corpore valdè diminuto. Si non adeò vaporoſus fuiſſet Aer, frequentius accuratiuſque diſtantias* Veneris & Lunæ *à* Jove, *aliiſve quibuſdam Fixis cepiſſem; ut jam non niſi eas, quas mitto, obſervare licuerit. Horâ* 7. 40′. *eo ipſo die tres* Parelii *apparuerunt. Quid Vos hiſce de rebus deprehendiſtis primâ occaſione exſpecto.*

Tranſitus

Tranſitus Lunæ Supra Venerem, Ao. 1670.

die 11 Octob. ſt. n. Obſervatus.

GEDANI

A

Johanno Hevelio.

Iuxt. hor. amb. mane. Hor. '.	'.		*Diſtantiæ & Altitudines.* °. '. ".	*Tempus ex altitud. Correct.* Hor. '. "
3 47	20	*Altitudo Lucidæ* ♈	41. 45. 0	3. 54. 10
3 50	25	*Eadem altitudo*	41. 21 0	3. 57. 28
5 47	44	*Diſtantia* ♀ *in* ♃.		5. 54. 44
5 48	35	*Diſt.* ☽ *limb. orient. à* ♃	35. 25. 30	5. 55. 35
5 51	59	*Diſt.* ♀ *à* ♃.	35. 50. 0	5. 59. 0
5 53	40	*Diſt.* ☽ *limb. orient. à* ♃.	35. 29. 10	6. 0. 40
6 12	30	*Diſt.* ♀ *à* ♃.	35. 50. 20	6. 6. 0
6 14	3	*Diſt.* ☽ *limb. orient. à* ♃.	35. 37. 35	6. 8. 0
6 37	0	*Diſtit.* ♀ *à* ☽, *quantum nudo oculo dijudicari potuit.*	6. 0 5. 0	6. 51. 0 7. 7. 0
7 12	0	*Diſt.* ♀ *à* ☽ *limbo infer.*		
7 17	0	*Diſtit.* ♀ *à* ☽, *limb infer.*	4. 0	7. 12. 0
7 35	0	*Venus clarè apparuit, ſed Luna non ampl. ob nubec.*		7. 30. 0
7 45	0	*Venus* ; *ſimul tres* Parelii *apparuerunt.*		7. 40.
9 11	0	*Venus permanſit conſpicua.*		9. 12. 0
9 15	48	*Altitudo Solis.*	19. 48. 0	9. 17. 20
9 17	39	*Altitudo Solis.*	19. 58. 0	9. 19. 4

Tertio,

Tertio, *Nova illa Stella ſub* Capite Cygni, *quæ initio* Tertiæ *videbatur* Magnitudinis, *mirum in modum Menſe* Septembri *decrevit, adeò ut* 14. Octobris *nullâ ratione amplius* Sextante *obſervari à me potuerit; licèt omnem adhibuerim diligentiam. Nam vix ac ne vix quidem nudo oculo animadverti potuit; adeò ut ab hac die illam amplius non viderim, ut ut ſingulis diebus Cœlo ſereniſſimo omnes oculorum nervos ad eam intenderim. Altera verò* Nova *in* Collo Ceti *ad medium uſque menſis* Octobris, *Mandibulæ* Ceti *aqualis ferè extitit magnitudine, & claritate eam propemodum ſuperavit; adeò ut hoc Anno* Secundæ *fuerit magnitudinis, ac major quàm præcedentibus annis, excepto Anno* 1660, *quo major etiam* Mandibulâ Ceti *à me fuit deprehenſa. Aliis temporibus non memini eam* Tertiæ *Magnitudinis Stellas ſuperaſſe. Certum igitur eſt, ipſam non eandem ſemper præſe ferre Magnitudinem nec claritatem, ut ut in maximo ſuo exiſtat incremento: heſternâ verò die multum decreverat.*

Quod reſtat, Lentem illam Domini Burattini pro Tubo 70. *pedum elaboratam necdum explorare licuit. Idem promiſit aliam multò longiorem, pedum ſcil.* 140; *quam ubi accepero, illarum vires ſimul explorabo, Voſque deinde de omnibus & ſingulis certiores reddam.*

Succinum, *quod ſigillo cedit (de quo ante hac) inter omnium rariſſima quæ apud nos reperiuntur, meritò habetur; quippe dum vixi, ſi bina illa fruſta, quæ penes me habeo, excipias, ne unquam quidem vel minimum fruſtulum vidi, ut ut tale à multis annis ſollicitè quæſiverim. Interim ut Illuſtriſſimæ* Societati *promptitudinem meam declarem, illi ex binis illis fruſtulis, quæ penes me ſunt, alterum proximo vere navi quadam tranſmittam; terrâ quippe id fieri nequit ſi faciem, figuram, atque inſignia impreſſa omnino retinere debeat. An unquam fruſtulum, altera parte molle, alterâ duriſſimum poſſim impetrare, valde dubito.*

In Machina mea Cœleſti alacriter & conſtanter, quantum occupationes aliæ unquam permittunt pergo. Valete & porro favete veſtro Conſodali, Illuſtriſſimæ Societati R. *devinctiſſimo* Joh. Hevelio. *Dabam* Dantiſci 1670. D. 31. *Octobris.*

Lunæ

Lunæ ad Fixas Saturnumque,

Anno 1671.

Appulſus obſervabiles, prædicti, & ad Meridianum Latitudinemque *Londini* accurate ſupputati à *Joh. Flamſteadio* Derbienſi-Anglo.

1. ANno 1671. Januarii 4°, *Luna appellit ad ſtellam in altero flexu Auſtrali aquæ* Aquarii, *Magn.* 5. *cujus long.* ♒ 12°. 18'. *Lat.* 2°. 49'. *Auſtr.*

Londini, hujus occultationis,

	h.	'	"					
Initium	6.	57.	10	*Lat* ✶ᵃ *à centro Lunæ in*	*Ingr.*	15.	05	*Auſt.*
Finis	7.	14.	22		*Emerſ.*	16.	51	
Mora	0.	17.	12					

2. Febr. 13. *poſt mediam noctem ſequentem celebratur appulſus Lunæ ad ſtellam honoris* 4. *quæ vocatur Borealis trium ſub ventre* ♍ ; *cujus Long.* ♍ 9°. 53'. 5". *Lat.* 1°. 20'. 30" *Auſtr.*

Londini, Stellæ dictæ,

	h.							
Immerſ.	14°.	24'.	45".	*Lat.* ✶ᵃ *à centro Lunæ in*	*Immerſ.*	7'.	05"	*Auſt.*
Emerſ.	15.	30.	54.		*Emerſ.*	1.	20	
Mora ſub ☽ᵃ.	1.	06.	09.					

3. Mart.

h.
3. Mart. 4. 8. 46'. *p. m. ſecundùm* Wingi *Ephemerides Luna congreditur cum Media trium in cauda* Arietis, *cujus eo tempore long.* ♈ 17°. 19'. 8". *Lat. Sept.* 2°. 50".

Londini,

	h.			
Subingr.	10. 14'. 52".	*Lat. Stellæ à centro* ☽ *æ in*	*Immerſ.*	16'. 07".
Detectio ✶ *æ*	10. 31. 13.		*Emerſ.*	15. 39.
Mora ſub ☽ *a.*	0. 16. 21.	*Max. appropinquatio centror.*		15. 53.

4. April. 12. *alterâ horâ poſt occaſum Solis Luna appellit ad* Spicam Virginis, 1æ *Magnit.*

Londini.	*Derbiæ.*			*Lond.*	*Derb.*
h.	h.			' "	' "
Subing. 9.05'.53"	9.01'.00"	*Lat.* ✶ *à centro* ☽ *æ in*	*Immerſ.*	3,08	2.39 *A.*
Emerſ. 10.20.35	10.13.45		*Emerſ.*	4,33	4.48 *B.*
Mora 1.14.41	1.12.39				

5. Maii 6. *Luna, poſt occaſum Solis, Borealem trium ſub ventre* ♍ (*magn.* 4*tæ*) *cooperiet: Cujus Long.* ♍ 9°. 53'. *Latit.* 1°. 20'. *Bor.*

Londini Stellæ,

	h.				
Subingr.	9. 09'. 37"	*Lat. à centro* ☽ *æ in*	*Subingr.*	1'. 54".	*Bor.*
Emerſ.	10. 14. 56		*Emerſ.*	8. 10.	
Mora.	1. 5. 19				

6. Maii 21. *Saturno Cynthia jungitur poſt mediam noctem ſequentem.*

Londini centri Saturni

In

	h.				
Ingreſſus	14. 29'. 17".	*Lat.* ♄ *à centro* ☽ *in*	*Immerſ.*	8'. 52".	*Bor.*
Emerſio	15. 31. 23.		*Emerſ.*	4. 27.	
Mora ſub ☽	1. 02. 06.				

h.

7. Julii 17. 13. 8". *Luna, Authore* Wingo, *cum Stella, ſti honoris dicta, in Lino Boreo* ☌*um à Connexu præcedens: ejus tunc temporis locus* ♈ 23°. 7'. 26". *lat.* 1°. 38½ *Bor.*

Londini ſtellæ cum Luna

	h.				
Congreſſio	12. 8. 32.	*Lat. à centro* ☽ *ad Boream in*	*Immerſ.*	14'. 50".	
Sejunctio	12. 52. 21.		*Emerſ.*	12. 10.	
Mora ſub ea	0. 43. 49.				

h.

8. Septemb. 9. 10. 54'. *Luna juxta Ephemerides cum ſtella Lucis 4tæ in Lino Auſtrali* ☌*um lucidiorum trium media, cujus long.* ♈ 12°. 53'. *lat.* 1°. 5½. *Bor.*

Londini Occultationis

	h.				
Initium	10. 23'. 48".	*Stellæ à centro* ☽ *Lat. ad Bor. in*	*Immerſ.*	15'. 20".	
Finis	10. 59. 33.		*Emerſ.*	11. 11.	
Duratio	0. 35. 45.				

9. Octob. 9. *poſt mediam noctem ſequentem, Luna ad* Pleiadas *appellit, quarum loca ad inſtans tempus proveniunt.*

	long.	*lat.*	*magn.*
Occidentalis lucidior	24°. 41'. 48".	4°. 9'. 40".	5.
Occidentalis Borealior	24. 52. 07.	4. 31. 36.	6.
Infima occidentali proxima	24. 58. 37.	3. 53. 30.	6.
Sequens Borealior	24. 59. 07.	4. 23. 56.	6.
Media & lucida	25. 19. 37.	4. 00. 00.	3.
Quæ eſt in cuſpide ad ortum	25. 45. 07.	3. 51. 20.	5.
Orientalium ſuperior	25. 46. 07.	3. 54. 00.	7.

Occidentalis lucidioris inter Pleiades

	h.			
Immerſ.	16.15'.13".	*Lat. à centro ☽æ ad Bor. in*	*Ingreſſu*	1'. 22".
Emerſ.	17.21.20.		*Egreſſu*	2. 15.
Mora.	1.06.07.			

Mediam & Lucidam Pleiadum Luna nobis.

	h.			
Subducit	17.33'.07".	*Lat. lucidæ à centro ☽æ ad Auſtr. in*	*Ingr.*	7'.16".
Retegit	18.29.23		*Emerſ.*	6.37.
Detinet	0.56.16			

Infimam occidentali proximam Luna

	h.			
Attingit	17. 4'. 36".	*Lat. ✳ à ☽a ad Auſtr. in*	*Ingreſſu*	14'. 07".
Detegit	17. 40. 34.		*Emerſ.*	13. 40.
Retinet	0. 35. 48.			

Succedit autem quæque Phaſis alteri hoc ordine:
Octobris 10*mo mane.*

Phaſ.	h. ' "	
1	4.15.13.	*Luna Occidentalem lucidiorem attingit.*
2	5.04.36.	*infimam occidentali proximam obſidet.*
3	5.21.20.	*occidentalis lucidior emergit.*
4	5.33.07.	*media & lucida luce nobis capta eſt.*
5	5.40.34.	*infima occidentali proxima evadit.*
6	6.29.23.	*media & lucida Pleiadum remittitur.*

10 Novemb. 3. *ineunte nocte Luna iterum Mediam in Lino Auſtrali,* ✳*um aggreditur, cujus tunc temporis locus verus* ♈ 12°. 53'. 40". *cum Lat.* 1°.05'.03". *Bor.*

Londinî

Loudini Luna ſtellam

	h.	′	″				°	″
Subripiet	7.	47.	07.	*Lat.* ☽ *à centro* ☽ *ad Bor. in*	*Ingr.*		8.	13½.
Remittit	8.	52.	45.		*Emerſ.*		0.	19½.
Retinet	1.	05.	38.					

h. ′

11. Decemb. 3. 14. 30; *juxta Ephemeridas, Luna Pleiades aſſequitur.*

Pleiadum occidentalis Lucidior à Luna

	h.	′	″				′	″
Capta eſt	14.	16.	46.	*Lat.* ☽ *à centro* ☽ *ad Bor. in*	*Ingr.*		1.	46.
Remiſſa	15.	11.	34.		*Emerſ.*		2.	15.
Retenta	0.	54	48.					

Mediæ & Lucidæ Pleiadum

	h.	″	″				′	″
Subingreſſus	15.	21.	38.	*Lat.* ☽ *à centro* ☽ *ad Auſtr. in*	*Ingr.*		3.	02.
Retectio	16.	16.	18.		*Emerſ.*		0.	55.
Mora ſub ☽	0.	54.	40.					

Infimæ occidentali proximæ

	h.	′	″				′	″
Subtectio	14.	50.	06.	*Lat. à centro* ☽ *ad Auſtr. in*	*Ingreſſ.*		10.	34.
Emerſio	15.	36.	06.		*Exitu*		9.	04.
Mora	0.	46.	00.					

Ultimæ, quæ in cuſpide eſt ad ortum,

	h.	′	″				′	″
Immerſio	16.	09.	19.	*Lat.* ☽ *à centro* ☽ *ad Auſtr. in*	*Ingreſſ.*		9.	56.
Emerſio	16.	53.	09.		*Exitu*		7.	55.
Mora ſub ☽	0.	43.	50.					

Cæterum hujus phœnomeni tali ordine ſuccedunt Phaſes:

Phaſ.	h. ' "	
1	14.16.46.	*Occidentalis lucidior ſubripitur.*
2	14.50.06.	*infima occidentali proxima obtegitur.*
3	15.11.34.	*occidentalis lucidior emergit.*
4	15.21.38.	*media & lucida obſcuratur.*
5	15.36.06.	*infima prodit occidentali proxima.*
6	16.09.19.	*quæ in cuſpide ad ortum occupatur.*
7	16.16.18.	*media & lucida ſe à Luna exerit.*
8	16.53.09.	*quæ in cuſpide ad ortum evadit.*

All thoſe that deſire the Advancement of *Aſtronomy*, and have conveniency of making Obſervations, are herewith ſollicited to apply themſelves with all diligence and exactneſs to obſerve theſe recited Appearances.

Accompt of three Books.

I. *ORIGO FORMARUM & QUALITATUM; juxta Philoſophiam Corpuſcularem Conſiderationibus & Experimentis Illuſtrata*, à Roberto Boyle *Nobili* Anglo, è Societ. Regia. *Oxon.* 1669. *in* 12°.

HAving formerly, (*Numb.* 11.) given the Contents of this Inſtructive Treatiſe, we again take notice of it here, only to let Forreigners know, that the ſame is now Printed in the *Latin* Tongue, after it had been publick in the *Engliſh* ſince *April*, of the year 1666.

II. *METALLOGRAPHIA, or an Hiſtory of Metals*; *by* John Webſter, *Practitioner in Phyſick and Chirurgery*, London, *for* Walter Kettilby *in Pauls Church-Yard.* 1670. *in* 4°.

THe Author of this Hiſtory hath with much diligence and curioſity deliver'd therein (to ſpeak of it in general,) the